REMARKS

Claim Amendments

Applicant has amended Claim 1 to substantially include the elements of Claims 3 and 7. Claim 7 has been cancelled. In amending Claim 1 to include the recitation of claim 3, the limitation "evenly" has been excluded. Support for this exclusion can be found, for example, at paragraph 38 which recites that the winding distribution of the control winding "need not be even." Independent claim 13 has been similarly amended.

Anticipation Rejection

Examiner has rejected claims 1, 2, 5-6 and 8 as allegedly anticipated by U.S. Patent No. 2,975,298 to Fawcett et al. ("Fawcett"). In view of the amendments and the remarks provided herein, the rejection should be reconsidered and withdrawn.

Fawcett shows a coil arrangement in which the first and second toroid cores both carry portions of the first and second working windings. In other words, the first working winding is wound around both the first and second toroid core and the second working winding is wound around both the first and second toroid core, wherein the first and second working windings are wound in opposite directions around the toroid cores. This concept is illustrated in Fawcett's Figs. 1, 5, 6A and 6B. Particularly, Fig. 5 shows that both cores carry parts of both working windings in the same manner as shown in Fig. 1.

As amended, Claim 1 recites: "each of said first and said second working windings wound on its respective toroid core only." (Emphasis added.) Since Fawcett discloses

both working windings wound around both the first and second toroid cores, the reference does not anticipate Claim 1.

Each of Claims 2, 4-6, 8-12 is deemed patentable over Fawcett by the virtue of its dependence from Claim 1. Accordingly, additional reasons for patentability of each of said claims will not be proffered.

Obviousness Rejection

Claims 3, 4, 7 and 9-15 stand rejected as allegedly unpatentable over Fawcett in combination with various secondary references. Of those, claim 13 is the only independent claim and is rejected over Fawcett in view of Patent No. 6,583,706 to Larikka.

The claimed invention is directed toward controlling high frequency currents in switching power supplies. In conventional systems, when inductivity is at a minimum due to a DC biasing current, the toroid cores are at a high saturation such that high frequency fields can no longer be accommodated due to a large permeability μ in the core. This inevitably causes large interference and emission problems.

The coil arrangement of Fawcett is used as a switching element for read/write operations of a magnetic drum. Therefore Fawcett does not even relate to the same field of endeavor as Applicant's claimed invention, let alone addressing the problems contemplated by Applicant.

As amended, Claims 1 and 13 define three major differences over Fawcett. First, each claimed working winding is wound on its respective core only. Second, the

windings of the control winding are distributed over the circumference of both cores. Finally, each working winding is evenly distributed around the periphery of the respective core. (See, *e.g.*, claim 3.) These structural differences provide a number of advantages.

One significant advantage of the claimed structure over Fawcett is the arrangement and distribution of the working windings and the control windings over the entire toroid cores. Only the claimed geometry enables a perfect guidance of the magnetic field within the core while significantly reducing emission. In addition, by distributing the windings over the respective cores, optimum use can be made of the available winding space and losses due to the reduction of core heating. Distributing the control winding on both toroid cores enables an exceptionally even pre-magnetization of the core material. Further, the evenly-wound coil geometry is inherently self-shielding and prevents magnetic stray fields from leaving the toroid cores. Fawcett fails to disclose or discuss any of the above structural features or effects of the claimed invention. Therefore, the differences between the claimed invention and Fawcett are such that the subject matter of the claimed invention could not have been obvious to one of skill in the art based on Fawcett.

The secondary references fail to address these deficiencies.

For example, Larikka alleges a single layer winding evenly distributed around the circumference of a toroid core. However, the reference does not relate to a coil arrangement having a variable inductance as there is neither a control winding nor working windings wound on separate cores. Larikka relates to a choke used for filtering

interference that occur in an electric current. Larikka uses the low interference characteristics of a wound toroid core. Larikka does not disclose a variable inductance wherein the inductivity is adjusted using a DC pre-magnetization current in a control winding. Because Larikka describes a completely different coil arrangement having a different effect from that of the present invention, a person of ordinary skill in the art would have no reason to modify the coil of Fawcett in view of Larikka.

For these reasons, independent claims 1 and 13 are deemed patentable over the references of record. Claims 3, 7 and 9-12 depend from claim 1 and are deemed patentable by the virtue of this dependence. Accordingly, the references to Schafer and Conway will not be addressed. Claims 14 and 15 depend from independent claim 13, which as explained, is patentable over Fawcett and Larikka. Thus, additional reasons for patentability of each of claims 14 and 15 will not be proffered.

Reconsideration and withdrawal of the obviousness rejections are requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance. A notice to this effect is respectfully requested.

While an extension of time is not deemed necessary, the Office is requested and hereby authorized to charge the appropriate extension-of-time fees against Account No. 04-1679 to Duane Morris LLP.

If any point remains that is deemed best resolved through a telephonic conversation, the Office is hereby requested to contact the undersigned directly.

Respectfully Submitted,

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